

GUJARAT TECHNOLOGICAL UNIVERSITY
PHARM.D Year-4 / PHARM.D (PB) Year-1 • EXAMINATION – SUMMER - 2024

Subject Code: 848804/818904**Date: 14/05/2024****Subject Name: Biostatistics & Research Methodology****Time: 10:30AM TO 01:30PM****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain use of computers in patient database management in hospital pharmacy. **06**
(b) Make a list of any 4 different types of inventory analysis methods. Write a note on inventory management report. **04**
(c) Give advantages and limitations of computerized prescriptions. **04**
- Q.2** (a) What is hypothesis? What are different types of hypothesis? Explain how you will formulate a hypothesis with a suitable example. **06**
(b) Define alternative and null hypothesis. Explain type 1 & type 2 error in detail. **04**
(c) Write a note on ABC analysis. **04**
- Q.3** (a) What are the different parts of medication order management system? Explain dispensing in detail with example. **06**
(b) Write a note on SPSS software. **04**
(c) Define Biostatistics. Write application of Biostatistics in the field of pharmacy. **04**
- Q.4** (a) Explain: Power is a function of sample size and variability. **06**
(b) Define case studies. What is importance of conducting case studies in biostatistics? **04**
(c) Write a note on determination of sample size for simple comparative experiment and for confidence interval of specific width. **04**
- Q.5** (a) Explain the steps in report writing in detail **06**
(b) Write a note on tabulation of data and parts of a table. **04**
(c) The Piramal Pharma estimates its carrying cost at 45% and its ordering cost at 900 rs per order. The estimated annual requirement is 2,88,000 units at a price of 120 per unit. What is the most economical number of units to order? How often should an order be placed? How many orders should be placed in a year? **04**
- Q.6** (a) Define epidemiology. Explain objectives of epidemiological study. Make a list of stages of epidemiological investigation **06**
(b) Write a note on cohort and cross-sectional study. **04**
(c) Explain the general rules of constructing and labeling a graph. Explain any one type of graphical representation of statistical data with suitable examples. **04**
- Q.7** (a) Differentiate Population and sample. Define: retrospective designs, level of significance, ANOVA. **06**
(b) Discuss importance of P value in statistical tests with suitable examples. **04**
(c) Write a note on relative and attributed risk. **04**
-